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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,408	01/30/2002	Eric T. Easterbrook	SII-2627-U-C5	3734
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R REAMS GOODLOE, JR. & R. REAMS GOODLOE, P.S. 24722 104TH. AVENUE S.E. SUITE 102 KENT, WA 98030-5322				
			EXAMINER CRANE, DANIEL C	
			ART UNIT 3725	PAPER NUMBER 10

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,408

Applicant(s)

EASTERBROOK, ERIC T.

Examiner

Daniel C Crane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35,37,38,40 and 46-124 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18,31-35,37,38,40,54-73,76,81-107 and 111-124 is/are allowed.
- 6) ☒ Claim(s) 19,20,22-30,46-51,53,74,75,77-80 and 108-110 is/are rejected.
- 7) ☒ Claim(s) 21 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____ |

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COMMENT

Because of the large number of claims and the jumbo nature of this application, applicant is required to review the present claims under consideration to preclude the claiming of the same inventions and to eliminate any conflicting claimed subject matter from those filed in applicant's pending applications and applications now patented. A clear line of demarcation must be maintained between applicant's pending application and applicant's previously filed applications and patents.

Upon further review of the prior art of record, it appears that the prior art is pertinent to previously allowed claims. Accordingly, the indication allowable subject matter in the previous Office Action is withdrawn and the claims are rejected as noted below. It is regretted that the prior art had not been applied sooner against the noted claims.

AMENDMENTS TO THE SPECIFICATION

In applicant's response of December 2, 2003, applicant has made extensive changes to the original disclosure by correcting various paragraphs through replacement paragraphs. However, the replacement paragraphs are at incorrect lines in the specification. In view of this mismatch, the amendment to the specification cannot be made. Accordingly, the specification amendments have not been entered and the original specification remains as is.

REJECTION OF CLAIMS ON FORMAL MATTERS

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to

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enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original specification does not indicate that the resulting dimple shape impressed on the surface of the structure by the tool-contacting end “does not appreciably increase the thickness of said structure when said contacting end is engaged with said first surface”. Accordingly, the claims define features that are not explicitly described in the original disclosure. Thus, the claims incorporate new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24, 108-110 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As to claim 24, the reference to the “method of claim 1” is unclear as claim 1 is not directed to a method. Therefore, this scope of this subject matter is indeterminate. Reference is made to the method of claim 10 in claim 108; however, claim 10 is not a method. The scope of the subject matter of these claims is indeterminate. Accordingly, these claims are indefinite and have been examined as best understood.

REJECTION OF CLAIMS OVER PRIOR ART

Claims 19, 20, 22, 23, 24, 46, 47, 48, 49, 50, 51, 53, 77 and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (Canadian document no. 2,121,120). Since Wong uses a preselected amount of pressure (18Kn) in the indenting force to form and impart a residual compressive stress within the surface of the structure, a “preselected amount of residual stress” will be established within the structure. Furthermore, since Wong is concerned with imparting compressive residual stress within the structure to improve the fatigue life of the structure, the residual stress will not be arbitrary and the design of the improved structure will involve a specific indenting force with a specific compressive residual stress to result in an improved structural product. As to the claimed interference fit, see page 11 where the fastener 32 is a “snug push fit” within the holes of the structure. Thus, an interference fit will be established. As to claim 20, see Figure 17 where the rivet/fastener 32 is countersunk within the structure, thus inherently resulting in compressive stress being applied against the rivet. Wong’s fatigue improvement process is directed to the aircraft industry and would, thus, inherently foresee the applicability of the indenting process to be for all jointed structures, i.e., the joint between several layered structures. Accordingly, it is clearly inherent that each of the first and second members of the structure be provided with the beneficial compressive stresses within all the members. As to claim 24, this claim has been examined as best understood. Since Wong’s indenter moves, it is “dynamic”. As to claims 77 and 78, see Figures 6 and 7.

Claims 74, 75, 79 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (Canadian document no. 2,121,120). The claimed method is taught by Wong where an

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indenter is positioned at a pre-selected position on the workpiece 10, indented by opposed indenter mandrels 12 followed by the step of removing from the body of the workpiece a selected portion of the workpiece indented by the workpiece. Wong does not indicate that a “slot” may be worked about its bounding portion. However, it is maintained that the skilled artisan would have recognized this in light of Wong’s disclosure at page 4, fourth paragraph. Since Wong recognizes that the mandrels 12 may be of any shape “square, hexagonal, round...”, it is clearly evident that it would have been obvious to the skilled artisan to have performed the process on a slot so as to improve the fatigue life of the product. The particular use of the product is considered a matter of choice. While Wong does not show the use of a lubricant in the shaping operation, it is the examiner’s position that such lubricant use within the shaping art is well known for the purpose of reducing friction between the workpiece and the shaping tool. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Wong’s process by further providing a lubricant as well known so as to reduce the amount of the friction between the workpiece and the shaping tool.

INDICATION OF ALLOWABLE SUBJECT MATTER

Claims 1-18, 31-35, 37-38, 40, 54-73, 76, 81-107 and 111-124 are allowed.

Claims 21 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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RESPONSE TO APPLICANT'S COMMENTS

As to the applicability of the Wong teaching against claims 74 and 75, this rejection is considered tenable. It is clearly within the purview of the skilled artisan having the benefit of Wong's teaching of improving the fatigue life of an opening within a workpiece to apply the teaching to any desired product with the result of obtaining Wong's objectives. As to claim 74, it is further noted that applicant's arguments (relating to gears, turbine rotors, etc.) is unsupported by the claimed language. Since Wong uses the method on non-circular openings, the method is fully applicable to structures that use "slots" as their joint configuration.

In light of the new grounds of rejection, not necessitated by applicant's amendment, applicant's further remarks are moot.

Patent no. 3,803,898 appears in applicant's IDS, filed December 2, 2003, therefore its consideration is listed within the documents of prior art. No correction need be made.

The Terminal Disclaimer, filed December 2, 2003 is proper and has been recorded.

INQUIRIES

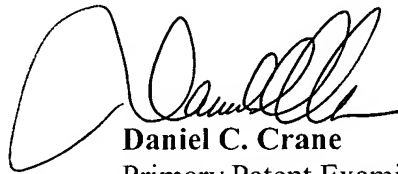
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is (703) 308-1870. The examiner's office hours are 6:30AM-5:00PM, Tuesday through Friday. The examiner's supervisor, Mr. Allen Ostrager, can be reached at (703) 308-3136.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1148.

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Documents related to the instant application may be submitted directly to Group 3700 by facsimile transmission at all times. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Group 3725 Facsimile Center number is (703) 872-9306.

DCCrane
February 19, 2004

A handwritten signature in black ink, appearing to read 'Daniel C. Crane', written over a horizontal line.

Daniel C. Crane
Primary Patent Examiner
Group Art Unit 3725